

## AMENDMENTS TO THE CLAIMS

Please amend the claims as shown below.

1. (Currently Amended) A computer-implemented method of calculating a net present value (NPV) of an average spot basket option, comprising:
  - reading an evaluation date into a memory;
  - accessing reading contract data for one or more underlyings belonging to a basket over a network, the contract data stored in a remote database coupled to a first computing device and accessed over the network using a database interface and a network interface; into the memory;
  - accessing reading market data for one or more underlyings belonging to the basket over the network, the market data stored in the remote database coupled to the first computing device and accessed over the network using the database interface and the network interface; into the memory;
  - accessing reading an indication of whether the NPV is designated for a call or a put over the network, the indication stored in the remote database and accessed over the network using the database interface and the network interface; into the memory;
  - calculating, using a processor, a first moment of a sum of spot values  $S_j(t)$  of two or more underlyings of the basket using an equation given by 
$$\langle M \rangle = \frac{1}{N} \sum_{j=1}^{N_A} S(t_E) e^{g_j(t_{m+1} - t_E)} \Sigma_j$$
where if  $t_E < t_1$ , then set  $m=0$ ;
  - calculating, using the processor, a second moment of the sum of spot values  $S_j(t)$  of two or more underlyings of the basket, wherein the first and second moments are approximate log normal distributions; and
  - applying a Black-Scholes formalism to the first and second moments to determine the net present value of an average spot basket option,

wherein the variable  $\Sigma_j$  of the first moment of the sum of spot values equation is represented by a first equation given by 
$$\Sigma_j = \frac{1 - e^{g_j(N-m)h}}{1 - e^{g_jh}}$$
 said calculating the first moment includes using a first equation if the absolute value of a value calculated using a riskless domestic interest rate and a dividend rate for the two or more underlyings and a time interval

as a function of both a subset of the contract data and a subset of the market data is greater than a predetermined number and wherein the variable  $\Sigma_j$  of the first moment of the sum of spot values equation is represented by using a second equation given by  $\Sigma_j = \sum_{i=0}^{N-m-1} e^{g_j h_i}$  if the absolute value of the value is less than or equal to the predetermined number.

2. (Original) The method of claim 1, wherein the first moment of the sum of spot values  $S_j(t_i)$  of all underlyings of a basket is given by:

$$\langle M \rangle = \frac{1}{N} \sum_{j=1}^{N_A} S_j(t_E) e^{g_j(t_{m+1} - t_E)} \Sigma_j, \text{ if } t_E < t_1 \text{ then set } m=0.$$

3. (Previously Presented) The method of claim 2, wherein the first moment is a modified forward spot,  $\tilde{F}$ , for the two or more underlyings.

4. (Previously Presented) The method of claim 1, wherein the second moment of the sum of spot values  $S_j(t_i)$  of two or more underlyings of a basket is given by:

$$\langle M^2 \rangle = \frac{1}{N^2} \sum_{j=1}^{N_A} \sum_{k=1}^{N_A} S_j(t_E) S_k(t_E) e^{(g_j + g_k + \rho_{jk} \sigma_j \sigma_k)(t_{m+1} - t_E)} \Sigma_{jk}, \text{ if } t_E < t_1 \text{ then set } m=0.$$

5. (Original) The method of claim 1, further comprising:  
calculating a modified strike value.

6. (Original) The method of claim 5, wherein the modified strike value is given by:

$$\tilde{K} = K - \sum_{j=1}^{N_A} \frac{1}{N} \sum_{i=1}^m S_j(t_i), \text{ wherein } t_m \text{ is latest instant with an already fixed spot.}$$

7. (Original) The method of claim 1, further comprising:  
calculating a first modified normal distribution function.

8. (Original) The method of claim 7, wherein the first modified normal distribution function is given by:

$$N(+\tilde{d}_1), \text{ wherein } \tilde{d}_1 = \frac{\ln \frac{\tilde{F}}{\tilde{K}}}{\nu} + \frac{\nu}{2}.$$

9. (Original) The method of claim 1, further comprising:  
calculating a second modified normal distribution function.

10. (Original) The method of claim 9, wherein the second modified normal distribution function is given by:

$$N(+\tilde{d}_2), \text{ wherein } \tilde{d}_2 = \tilde{d}_1 - \nu.$$

11. (Cancelled)

12. (Previously Presented) The method of claim 1, further comprising:  
comparing the determined net present value to a predetermined value; and  
if the net present value is greater than the predetermined value, then displaying a first message on an output device, and  
if the net present value is less than the predetermined value, then displaying a second message on the output device.

13. (Cancelled)